



Faculty of Economics and Business

**EXCHANGE RATE AND TRADE BALANCE RELATIONSHIP:
EMPIRICAL STUDY IN CAMBODIA, THAILAND
AND VIETNAM**

Michelle Kong Ping Ping

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**EXCHANGE RATE AND TRADE BALANCE RELATIONSHIP: EMPIRICAL
STUDY IN CAMBODIA, THAILAND AND VIETNAM**

P.KHIDMAT MAKLUMAT AKADEMIK
UNIMAS



1000245042

MICHELLE KONG PING PING

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Statement of Originality

The work described in this Final Year Project, entitled “**Exchange Rate and Trade Balance Relationship: Empirical study in Cambodia, Thailand and Vietnam**” is to the best of the author’s knowledge that of the author except where due reference is made.

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(Date submitted)



Michelle Kong Ping Ping
24000

ABSTRACT

EXCHANGE RATE AND TRADE BALANCE RELATIONSHIP: EMPIRICAL STUDY IN CAMBODIA, THAILAND AND VIETNAM

BY

MICHELLE KONG PING PING

The purpose of this study is to investigate the relationship between exchange rate and trade balance in both short run and long run for three Indo-China countries, namely Cambodia, Thailand and Vietnam for the period from 1994 (IV) to 2010 (IV). The stationary test, ARDL bounds test and Granger causality have been used in the study. The empirical results indicate that although there is no long run relationship found between the exchange rate and trade balance in Cambodia, Thailand and Vietnam but the exchange rate does have impact on trade balance in these countries in the short run. These findings are important to policy makers to adopt an appropriate exchange rate regime to obtain a desired effect of trade balance.

ABSTRAK

KADAR PERTUKARAN DAN IMBANGAN PERDAGANGAN HUBUNGAN: KAJIAN EMPIRIKAL DI KEMBOJA, THAILAND DAN VIETNAM

OLEH

MICHELLE KONG PING PING

Tujuan kajian ini adalah untuk mengkaji hubungan antara kadar pertukaran dan imbangan perdagangan dalam jangka pendek dan jangka masa yang panjang untuk 3 negara Indo-China, iaitu Kemboja, Thailand dan Vietnam bagi tempoh dari 1994 (IV) 2010 (IV). Ujian pegun, ARDL batas ujian dan sebab-musabab Granger telah digunakan dalam kajian ini. Hasil kajian menunjukkan bahawa walaupun tidak ada hubungan jangka panjang yang terdapat di antara kadar pertukaran dan imbangan perdagangan di Kemboja, Thailand dan Vietnam tetapi kadar pertukaran mempunyai kesan ke atas imbangan perdagangan di negara-negara tersebut dalam jangka pendek. Penemuan ini adalah penting bagi penggubal dasar untuk menerima pakai rejim kadar pertukaran yang sesuai untuk mendapatkan kesan yang diinginkan imbangan perdagangan.

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CHAPTER ONE

INTRODUCTION

1.0 Introduction

Exchange rate can be defined as the rate in which one country's currency can be exchanged for another country's currency. The foreign exchange rate is the price of a currency. It used for the purpose of travel to other country or for the investment in foreign country. It is also useful in the international trade among countries. Exchange rate has a strong relationship with the international trade which they are interrelated.

According to Friedman (1953) (as cited in Hanke, 2008), exchange rate can be divided into three types. The first type is fixed exchange rate where a currency's value is matched to the value of another single stable and strong currency. Its value is remained at a fixed conversion rate through government or central bank intervention. The second type of exchange rate is floating or flexible exchange rate where a currency's value is decided by the market force of demand and supply or invisible hand in the market without government intervention. The third type is pegged exchange rate which almost same as fixed exchange rate but their theories are different. Pegged rate is not free-market mechanisms for international payments. Adversely it is base contains domestic and international components.

Exchange rate is important because it may influence the economic growth. Businesses that depend on the exports are found that the price of their product is competitive or expensive in the international market if the value of currency fluctuates. In other words, the companies that depend more on the imports are found that the costs of the imported products are rising with the fall of the exchange rate. Besides, exchange rate is important for the investors because it affected the actual return on an investment with overseas holdings. Exchange rate is also important to the traveller who likes to visit foreign country. Rational people normally will visit foreign countries which their currency is devalued because their purchasing powers on foreign products are higher. (Aziz, 2008 and Liew et al., 2003).

Besides, as for balance of trade or sometime called as trade balance can be defined as difference between exports of a country and its imports. A country would have trade surplus when exports are more than imports. On the other hand, when imports exceed exports, a country would face trade deficit. Trade balance consists two components which are export component and import component. Besides, export component included transferring goods and services which are produce domestically to abroad while import component included purchase goods and services which are produced from abroad.

According to Gomes and Paz (2005), the trade balance for a country can be improved by devaluation of currency of that country. A real depreciation can improve trade balance by making the price of export become relative cheaper than the price of import. On the other hand, when a country's currency is appreciated,

trade balance will drop. In other words, a real appreciation of currency would make the price of export become relative expensive than the price of import. This is due to decrease demand on domestic export and increase demand on foreign import. Therefore, trade balance will decrease due to import exceed export.

This study intends to investigate the relationship between exchange rate and trade balance in Cambodia, Thailand and Vietnam.

1.1 Background of the Study

1.11 Exchange Rate Regime in Three Indo-China Countries

Cambodia

Cambodia adopted a pegged exchange rate regime within 1953 to 1970 where its currency was pegged to gold. A three-tier exchange rate policy was introduced in 1974 where the pegged exchange rate regime was eliminated and replaced by New Exchange Market Rate. The currency of Cambodia, riel was experienced a massive depreciation throughout this period after adopted new exchange market rate regime. During 1975 to 1978, all the economy activities was owned and operated by the government. Meanwhile, Cambodia turns its economy system into barter system where all the currency and transaction has been banned. In

1980, the currency of Cambodia reintroduced, namely Cambodian Riel in 1990. From 1992 to 2011, Cambodia adopted a managed floating exchange rate regime which is based on United State (US) dollar and the exchange rate regime includes two rates which are official rate and parallel rate. The official rate is controlled by the National Bank of Cambodia while the parallel rate is determined by the supply and demand of money in the market.

Thailand

During 1960 to 1980, Thailand adopted a pegged exchange rate regime which is based on US dollar. In 1984, this regime has been replaced with basket of currencies based on Exchange Equalization Fund. In 1987, a free floating exchange rate regime was applied in order to control the currency from sharply depreciated. In 1990, the currency of Thailand was overvalued by free floating exchange rate regime in term of other currency due to US dollar is appreciated in that particular period. In 1997, Thailand start applied managed floating exchange rate regime in order to boost its economy which is determined by supply and demand of money in foreign exchange market. Recently, Thailand still adopted a managed floating exchange rate regime.

Vietnam

Prior to 1989, Vietnam applied fixed and multiple exchange rate system in different transaction which the rate is set by the government of Vietnam. However, this system was eliminated due to the merged of commercial and non-commercial Dong, namely convertible currency rate. In 1989, Vietnam starts its economic reform from central-planned to market oriented economy. During 1990 to 1998, Vietnam adopted a crawling peg exchange rate regime which is fixed to the US dollar in order to control the inflation rate, encourage export activities, balance the financial system and boost the economic growth. In 1999, Vietnam start adopted managed floating exchange rate to control the capital flow out to the country which cause the currency of Vietnam to devalue. Since 2005, Vietnam exchange rate regime has change to conventional fixed peg with US dollar in order to improve the balance of payment and stimulate economic growth.

1.12 Trade Balance Trend in Three Indo-China Countries

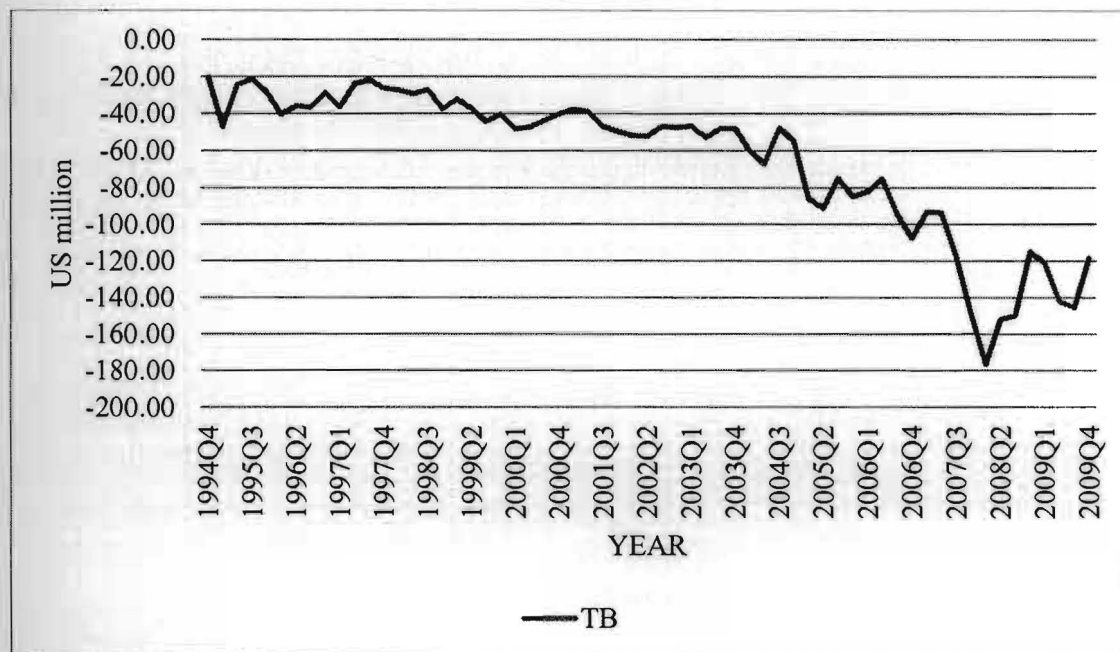
Trade balance refers to the difference between total exports and total imports. Change in exchange rate could bring positive impacts on trade balance where devaluation or depreciation of currency could increase exports and decrease imports by making the price of exports relative cheaper than the price of import and in return. As a result, trade balance can be improved. Figures below show the trade balance

trend for three selected Indo-China countries, namely Cambodia, Thailand and Vietnam from 1994 quarter four to 2009 quarter four.

Figure 1.1 shows the trade balance trend for Cambodia from fourth quarter (Q4) of 1994 to fourth quarter (Q4) of 2009. The trend shows that Cambodia experienced trade deficit over 1994Q4 to 2009Q4 periods. In 1995Q1, import for Cambodia has increased from USD 65.9 million to USD 140.74 million due to the availability of external financing. Meanwhile, export also increased USD 47.8 million compared to the fourth quarter of 1994. Due to import greater than export, Cambodia is facing a trade deficit which is about USD -47.13 million. The trade deficit has increased for about USD 27.04 million.

In 1995Q3, the trade deficit has reduced from USD -47.13 million to USD -21.28 million which is approximately 55 percent. The trade deficit increased from USD -28.63 million to USD -40.31 million during lately 1997 to early 1999 is due to Asian Financial crisis and political infighting. After recover back from the crisis, the trade deficit has reduced between 2001Q1 to 2003Q4 because the increase in export is more than increase in import. During 2007Q2 to 2008Q1, the trade deficit has increase sharply from USD -93.69 million to USD -176.74 million due to global crisis.

Figure 1.1: Trade Balance Trend for Cambodia from 1994Q4 to 2009Q4



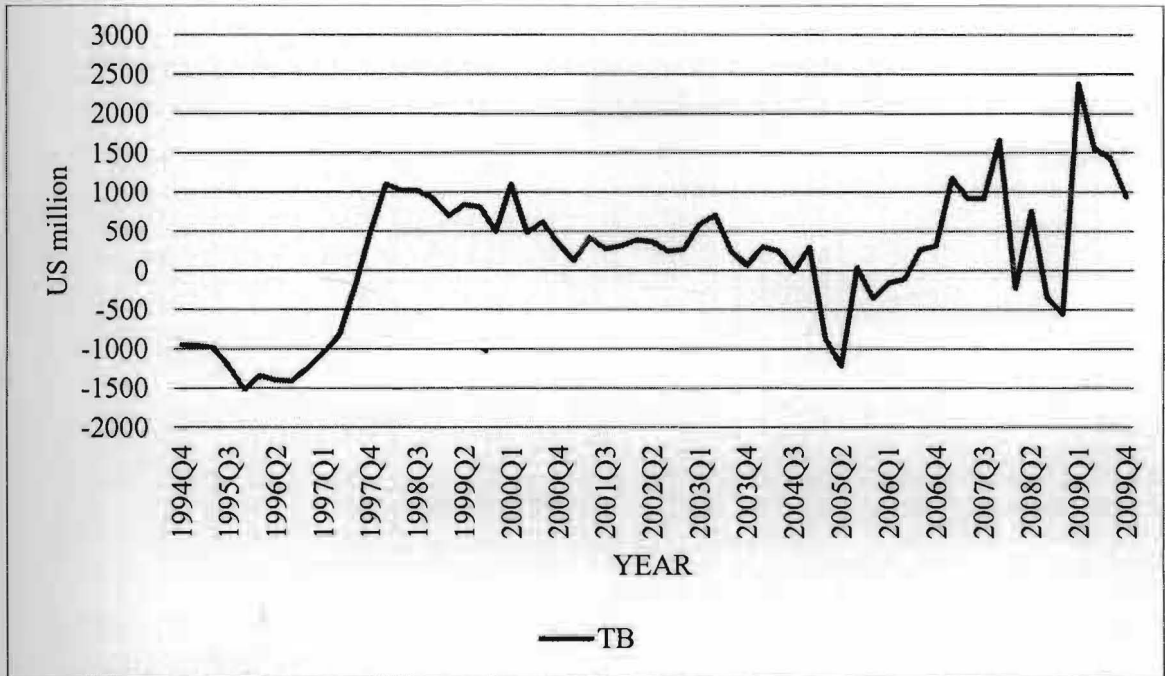
Source: World Bank, 2010.

Figure 1.2 shows the trade trend of Thailand from 1994Q4 to 2009Q4. During 1994Q4 to 1996Q4, Thailand generated the trade deficit from USD -946.90 million to USD -1214.66 million due to the ability to peg the exchange rate is decreased. During 1997Q1 to 1998Q1, export in Thailand has increased roughly due to the depreciation of Thailand currency. Thailand generated trade surplus as exports more than imports. After Asian Financial crisis, exports become main economy activities to encourage economic growth where export contributed about two thirds of the national income.

The trade balance has decreased from USD 1175.19 million to USD -223.51 million between 2007Q1 to 2008Q1 because of global crisis or Mortgage crisis.

After the crisis, the trade balance for Thailand has obtained trade surplus over 2008Q1 to 2009Q4 periods from USD 755.93 million to USD 13419.18 million when government of Thailand emphasized more on high technology export such as electrical appliance and automobiles (Puah et al. 2008).

Figure 1.2: Trade Balance Trend for Thailand from 1994Q4 to 2009Q4



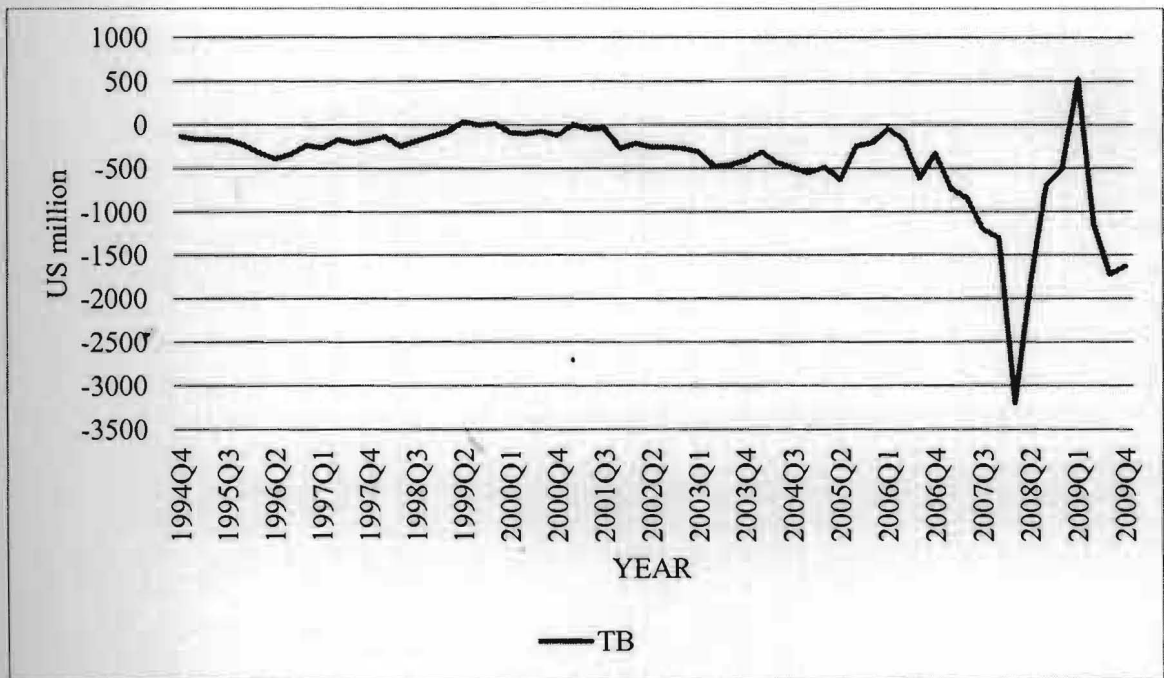
Source: World Bank, 2010.

Figure 1.3 shows the trade balance trend for Vietnam from 1994Q4 to 2009Q4. During 1994Q4 to 1999Q1, Vietnam is suffering from a trade deficit. The trade deficit is increased from 1994Q4 to 1996Q3 from USD -130.24 million to USD -338.77 million which is increased more than 100 percent. The trade deficit has decreased from 1997Q1 to 1999Q1 from USD -265.78 million to USD -75.69

million due to Vietnam has devalued its currency to encourage the export activities (Young, 2010). In year 2000, Vietnam trade deficit has decreased from USD -86.78 million to USD 3.87 million which received a trade surplus when Vietnam has signed the Bilateral Trade Agreement with United State which has encouraged the export activities and economic growth in Vietnam (Martin, 2011).

During 2007Q1 to 2008Q1, trade deficit has become worsen which the value increased from USD -737.18 million to USD -3196.47 million. This situation is because the global crisis has brought down the world economy and it directly affected the Vietnam economy (Abidin and Rasiah, 2009).

Figure 1.3: Trade Balance Trend for Vietnam from 1994Q4 to 2009Q4



Source: World Bank, 2010.

1.2 Problem Statement

The relationship between exchange rate and trade balance is a famous study since early year. The conventional theory (elasticity approach) mentioned that exchange rate is the only factor that can influence the trade balance. According to Ng et al. (2008), the relationship between exchange rate and trade is ambiguous. The impacts may be positive or negative depend on the level of economic development. The Marshall Lerner condition is one of the well-known impacts which say that exchange rate and trade balance have positive relationship in the long run where a real depreciation of currency can improve trade in the long run. However, it will first harm the trade in short run which is known as J-curve effect which is consistent with the results of Kalyoncu et al. (2009) and Gomes and Paz (2005), and Lal and Lowinger (2002). There are some researchers found a different result which is not consistent with the theory like, Matesanz and Fugarolas (2009) and Ng et al. (2008) found that a real depreciation would not harm the trade in short run before improving it in the long run. In other word, exchange rate and trade balance have positive relationship in both short run and long run.

Besides, based on absorption approach, changes in domestic and foreign income could have impacts on trade balance. Increase in domestic income would bring negative impact on trade balance where people increase demand on import which lead imports exceed exports. Hence, it would worsen the trade balance. Onafowora (2003) found the expected negative relationship between exchange rate and trade balance where increase in domestic income would lead to decrease the

export demand and worsen the trade balance. Adversely, there are also few researchers discovered an unusual relationship for exchange rate and trade balance in China, US, and Belarus where there is exchange rate depreciate lead to increase trade balance in both short run and long run.

The relationship between exchange rate and trade balance is still ambiguous due to difference results obtained from the previous studies. Besides, most of the researchers do the study in developed and less developed countries. Although there are also some researchers investigate relationship between exchange rate and trade balance in developing countries or least developed countries but the area is focused on East Asian countries and less concentrated on South East Asian countries.

There are some research question dealing with the study of relationship between exchange rate and trade balance. The research questions are listed as below,

1. Is there a relationship between exchange rate and trade balance in Cambodia, Thailand and Vietnam in the long run?
2. Is there a relationship between exchange rate and trade balance in Cambodia, Thailand and Vietnam in the short run?

1.3 Objectives of the Study

The general objective of this study is attempts to investigate the relationship between exchange rate and trade balance in three selected Indo-China countries, namely Cambodia, Thailand and Vietnam. The specific objectives is,

1. To examine whether exchange rate and trade balance are related in the short run in Cambodia, Thailand and Vietnam.
2. To investigate whether exchange rate and trade balance are related in the long run in Cambodia, Thailand and Vietnam.

1.4 Significance of the Study

The study of relationship between exchange rate and trade balance intends to provide better understand the effect of changes in exchange rate on trade balance. Besides, if the relationship between exchange rate and trade balance can be determined, policy makers are able to come out the solution to minimize the negative impacts of exchange rate volatility on trade balance of a country. With this, a nation is able to manage its trade when the exchange rate is not stable. Therefore, investigation on nexus between exchange rate and trade balance is important to guide policy markers make policies to overcome trade problems through exchange rate adjustment.

1.5 Scope of the Study

This study intends to examine the causality between exchange rate and trade balance in the context Cambodia, Thailand and Vietnam. The quarterly data start from 1994 quarter four (Q4) until 2010 quarter four (Q4) will be used in this study. There are only Thailand enjoyed the trade surplus where total exports exceed total imports. The other two countries are suffered for a trade deficit where they are more depending on import.

The rest of this paper is organized as follows. Section 2 provides the literatures review about the relationship between exchange rate and trade balance. Section 3 discusses the data description and methodology. Section 4 provides the empirical findings of this paper and the Section 5 concludes this study.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

The purpose of this study is to investigate the relationship between exchange rate and trade balance. The objectives of this study are to examine the short run and long run relationship between exchange rate and trade balance. This section contains a review of the theoretical frameworks, testing procedures and empirical evidence about relationship between exchange rate and trade balance in different countries. In this part, the theoretical frameworks that been put forward by previous researchers will be discuss, followed by the methodology and findings. Section 2.1 presents the theoretical frameworks, Section 2.2 discusses the testing procedures, Section 2.3 reviews the empirical findings and Section 2.4 is the concluding remark for Chapter 2.

2.1 Theoretical Framework

From the previous studies, there are some theories put forward by researchers to explain the relationship between exchange rate and trade balance in the research. The most common theories are the elasticity approach, absorption approach and monetary approach.